

## Tennessee Pollution Prevention Partnership Success Story



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## Cougars Continue to Save Kilowatts

### The Member

Centennial High School's Environmental Service Learning class, under the direction of Jeff Taylor, performs hands-on projects inside and outside the school. Through these projects, the class learns about human impacts on the environment. The class is broken down into 9 student-led teams. Each team has specific environmental goals, such as recycling, litter pick-up, erosion control, research, public relations, the nature trail, campus beautification and the murals. These teams identify and work toward their goals all year to create a better environment on campus and in the local community.

### The Story

This year, with only one class of Service Learning students to continue the environmental projects, they had a lot of work to keep up all the previous projects and start new ones of their own. But, nevertheless, they prevailed. They chose Energy Conservation as the project area for maintaining Performer level. Upon returning to school, students found that the vending machine lights had been turned back on over the summer by the vendors. Students had to contact the district manager for Coke and have him approve the shut off. It took several weeks and numerous calls before they found the manager that could authorize the lights be shut off.

Students re-activated the Energy Patrol for an 8-week period to raise awareness about energy conservation among students and staff. Students also orchestrated the annual Carpool To School for Earth Day event, which conserved energy as well as preventing air pollution.

Through a grant from the Tennessee Environmental Education Association, students decided to purchase solar lights to light the "Power Cat" hill project instead of using electrical power for spotlights. This project necessitated research into what type of lumens they would have to have to light the square footage of the "Power Cat." They also put together an educational solar lighting box for use by the science department to aid in the teaching of solar power.



### The Success

Students were able to get the cold drink vending machine lights turned off again and keep them off for the rest of the school year. This produces significant energy and cost savings since there are 23 cold drink vending machines at Centennial. Unmeasured quantities of electricity were also saved through efforts of the Energy Patrol, who again raised awareness about energy conservation at Centennial. Energy in the form of fossil fuels was also saved by the car pool event on Earth Day. The solar light project was the first use of solar at Centennial, providing education on renewable energy from the sun.

### The Pollution Prevented

Getting the vending machine lights turned off saves 25,060 kwh per year at Centennial. The solar lighting project saved 2,002 kwh per year. Altogether, these two projects will save \$1,082.48. It takes about one pound of coal to generate one kwh of electricity, so we will decrease the use of coal by a total of 27,062 pounds per year. With coal-fired power plants being a significant source of air pollution in the Tennessee Valley, the kwh savings will result in the savings of 4,404 pounds of Carbon Dioxide, 12 pounds of Nitrogen Oxides and 23 pounds of Sulfur Dioxide emissions every year. With Tennessee using coal as its primary source of energy, the students were able to save a non-renewable resource, provide cost savings to their school, and execute good stewardship towards the environment by decreasing the amount of energy wasted and pollution created.

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